

REMARKS

Claims 4, 5, 7, 10-14, 27, 29-34, 36 and 38-43 are pending in this application. By this Amendment, claims 4, 11, 12, 27, 32 and 34 are amended. Additionally, claims 30, 38 and 39 are amended solely to correct informalities. No new matter is added. Reconsideration based on the above amendments and following remarks is respectfully requested.

Applicant gratefully acknowledges the Office Action's indication that claims 36, 38-43 are allowed.

I. Interview

Applicant appreciates the courtesies shown to Applicant's representatives by Examiner Liang in the February 15, 2005 personal interview. Applicant's separate record of the substance of the interview is incorporated into the following remarks.

During the personal interview, Applicant's representative asserted that the applied references do not teach or suggest the following: 1) data current flows in a first current path from a power supply line to a current sink in a programming stage, the first current path does not pass through the electroluminescent device; and 2) the data current flows in a second current path from a power supply line to an electroluminescent element. However, the Examiner asserted that the independent claims 4, 11, 27 and 32 do not include all of the features discussed above.

Specifically, Examiner Liang asserted that the independent claims should be amended to clarify that a first current path is provided so that data current flows through a transistor to a data line during a programming stage. Further, Examiner Liang requested that Applicant further describe the programming stage and a reproduction stage, and how the claimed features distinguish over the applied references. Accordingly, Applicant amend independent claims to clarify the claimed features, and provide further explanation regarding the programming and reproduction stages set forth in the claims.

II. Rejection Under 35 U.S.C. §102(e)

The Office Action rejects claims 4, 5, 7, 10-14, 27 and 29-33 under 35 U.S.C. §102(e) over U.S. Patent No. 6,229,506 to Dawson et al. (hereafter "Dawson"). Applicant respectfully traverses the rejection.

Dawson does not disclose a driver circuit including a data current that determines a current level of a driving current in and "a first switching device connected so as to establish a first current path through which the data current flows during a programming stage, the data current flowing through the transistor and the first switching device during the programming stage," as recited in independent claim 1, and similarly set forth in independent claims 27 and 32. Dawson also does not disclose a method of controlling a supply of a driving circuit including "providing a first current path through which a data current that determines a current level of the driving current flows during a programming stage by using a first switching device connected so as to establish the first current path that allows the data current to flow through the first switching device to a data line," as recited in independent claim 11, and similarly set forth in independent claim 12.

The Office Action asserts that Dawson teaches a circuit and method of controlling a current supply to an OLED including a current path connecting to a current sink during a programming stage (Load Data phase). See Figs. 2 and 3, and col. 3, lines 31-35. Notwithstanding these assertions, Dawson does not disclose a first current path that allows a data current to flow through a first switching device to a data line during the programming stage, as set forth in independent claims 4, 11, 12, 27 and 32.

During the personal interview, the Examiner acknowledged that Dawson does not teach, in Fig. 2, a first current path that prevents a data current from passing through an electroluminescent element. However, the Examiner indicated that Dawson teaches, in Fig. 3, a first current path that prevents a data current, corresponding to a data voltage, from

passing through an electroluminescent element during an Auto-Zero phase and a Load data phase. See Figs. 3 and col. 4, line 61 - col. 5, line 23. Specifically, the Examiner asserted that data current is a constant current, eventually applied to the transistor T₁, and is prevented from flowing to an OELD when a transistor P2 is turned "Off." See col. 5, line 1-23. However, the Examiner agreed that Dawson does not disclose that a first current path is provided so that data current flows through a transistor to a data line during a programming stage.

In the circuits and methods of independent claims 4, 11, 12, 27 and 32, a data current (not a constant current) flows through the transistor and to a data line during the programming stage. For example, as described with respect to Fig. 3, the circuit and methods of claims 4, 11, 12, 27 and 32 operate in a programming stage and a reproduction stage. See paragraph [0039]. In the programming stage, T₄ is switched off and T₁ and T₃ are switched on so that a voltage V_{GS2} corresponding to a data current I_{DAT} controls the current supply to an OELD in the reproduction stage. During the programming stage, the transistor T₁ operatively connects transistor T₂ to a current sink connected to a data line. See paragraph [0038]. Subsequently, T₄ is switched on and T₁ and T₃ are switched off so that the transistor T₂ acts as a current source with the voltage V_{GS2} biased by C1 to supply current to the OELD. See paragraph [0042]. Therefore, the current path does not pass through the electroluminescent element (or current driven element) and does pass to the data line during the programming stage.

For at least these reasons, it is respectfully submitted that independent claims 4, 11, 12, 27 and 32 are patentable over Dawson. Claims 5, 7, 10, 13, 14, 29-31 and 33 variously depend from independent claims 4, 27 and 32, and thus also are patentable over Dawson for at least the reasons set forth above, as well as for the additional features they recite. Accordingly, reconsideration and withdrawal of the rejection under 35 U.S.C. §102(e) are respectfully requested.

III. Rejection Under 35 U.S.C. §103(a)

The Office Action rejects claims 12 and 34 under 35 U.S.C. §103(a) over U.S. Patent No. 6,580 to Bae et al. Applicant respectfully traverses the rejection.

Bae does not teach or suggest a circuit or method of controlling a supply of a driving circuit including a programming stage that provide a first current path through which a data current flows through a first switching device to current sink and a data line, as set forth in independent claims 12 and 34.

Bae teaches T1 and T4 are turned on to transfer a data signal to node A where the voltage of such is stored in a capacitor C_{STO} until another stage where the EL is driven. Bae does not teach or suggest that the signal is subsequently supplied to a data line. For at least these reasons, it is respectfully submitted that independent claims 12 and 34 are patentable over Bae. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

IV. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 4, 5, 7, 10-14, 27, 29-34, 36 and 38-43 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Date: February 16, 2005

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